



## Analyzing Anti-Terrorist Tactical Effectiveness of Picket Boats for Force Protection of Navy Ships Using X3D Graphics and Agent-Based Simulation

**Sponsor – SSC San Diego, SPAWAR Fellowship**

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**Goal - R&D in support of Navy Ship Anti-Terrorism and Force  
Protection.**

### Capabilities

- Preview of Harbors before ship entry
- Assess and visualize effectiveness of picket boat intercept/interdict tactics for own-ship AT/FP defense
- Gain insight on pier layouts, port structure, spatial relationships, shadow zones, sentry requirements before entering port
- Dynamic selection and configuration of scenarios of interest
- Real-time simulation for surface threat defense
- Statistical insight for defensive effectiveness
- Three harbors integrated so far: (Pearl Harbor, Aden Yemen, Port Hueneme, CA)

### Future Work

- Work to incorporate all ports world-wide
- Integration of additional threats (Air, Land, Sub-surface)
- Concept of Operations development for the Spartan USV
- Simulation of emerging defensive technologies
- Integration into Surface Warfare AT/FP training pipeline